The role of weight bias and stigma in eating disorders and continued weight gain

Dr Laura Hart l.hart@latrobe.edu.au
Norway, October 2019
The Role of the Pediatrician in Primary Prevention of Obesity

Stephen R. Daniels, Sandra G. Hassink, COMMITTEE ON NUTRITION

Strategies for the prevention and control of obesity in the school setting:
systematic review and meta-analysis

D L Katz, M O’Connell, V Y Njike, M-C Yeh & H Nawaz

A systematic review of the evidence regarding efficacy of obesity prevention interventions among adults

V. E. P. P. Lemmens, A. Oenema, K. I. Klepp, H. B. Henriksen, J. Brug

<table>
<thead>
<tr>
<th>Traditional obesity prevention</th>
<th>Eating disorders prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> Promote recognition of weight status and talk about harms of overweight</td>
<td><strong>1.</strong> Promote body satisfaction and eradicate weight bias/stigma</td>
</tr>
<tr>
<td><strong>2.</strong> Nutrition education</td>
<td><strong>2.</strong> Teach intuitive eating</td>
</tr>
<tr>
<td>• Reading labels/traffic light systems</td>
<td>• Listen to the body’s cues</td>
</tr>
<tr>
<td>• No sweet drinks</td>
<td>• Eat when hungry, stop when full</td>
</tr>
<tr>
<td>• No/limit high caloric foods with low nutritional value</td>
<td>• Be aware of marketing and production strategies</td>
</tr>
<tr>
<td><strong>3.</strong> Encourage health behaviours for weight loss</td>
<td>• Sugar/fat/salt <em>sometimes</em> in small amounts</td>
</tr>
<tr>
<td>• Promote food decisions for weight management</td>
<td>• Everyday foods for health and vitality and to respect our body</td>
</tr>
<tr>
<td>• Reduce sedentary behaviour (esp screen time)</td>
<td></td>
</tr>
<tr>
<td>• Promote exercise for weight management</td>
<td></td>
</tr>
<tr>
<td><strong>3.</strong> Encourage health behaviours for enjoyment, health and life goals/values</td>
<td></td>
</tr>
</tbody>
</table>
Why?

• Mental health plays a central role of in determining how and why we:
  • Eat
  • Make food choices
  • Exercise or avoid physical activity
  • Feel worthy of investment (self-esteem)
  • Are motivated to change health behaviours

• Eating disorder theories explain the role of mental health in eating and exercise:
  • Weight stigma
  • Body dissatisfaction
  • Negative affect/emotions (worry, shame and guilt)
Dual pathway model

Pressure to be thin → Body dissatisfaction → Dieting → Eating disorder

Thin-ideal internalisation → Body dissatisfaction → Negative affect → Eating disorder

Stice 2001 & 2019 Journal of Abnormal Psychology
Dual pathway model

Pressure to lose weight

Body dissatisfaction

Dieting

Negative affect

Eating disorder

Pressure to lose weight

Weight-bias internalisation

Table 1: Relation of Initial Body Mass to Subsequent Change in Eating Pathology and Change in the Putative Mediators of This Effect

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Follow-up</th>
<th>Age</th>
<th>Validated scale</th>
<th>ED outcome</th>
<th>Sample size</th>
<th>Effect size (r)</th>
<th>p</th>
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<tr>
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<td>36 mo</td>
<td>Adol</td>
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<td>ED</td>
<td>87</td>
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<tr>
<td>Cattarin &amp; Thompson (1994)</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Increase in body dissatisfaction</td>
<td>12 mo</td>
<td>Adol</td>
<td>No</td>
<td>ED</td>
<td>52</td>
<td>.02</td>
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<tr>
<td>Byely et al. (2000)</td>
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<tr>
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<td>Field et al. (2001)</td>
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<td>.16*</td>
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<td>Adol</td>
<td>No</td>
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<td>.574</td>
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<td>Patton et al. (1990)</td>
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<tr>
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<td></td>
<td></td>
<td>.11*</td>
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<tr>
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<td>Adol</td>
<td>Yes</td>
<td>ED</td>
<td>1,508</td>
<td>.00</td>
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<td>Lewinsohn et al. (1994)</td>
<td>20 mo</td>
<td>Adol</td>
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<td>Increase in eating pathology</td>
<td>36 mo</td>
<td>Adol</td>
<td>Yes</td>
<td>BUL</td>
<td>87</td>
<td>.09</td>
<td>.211</td>
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<td>Cooley &amp; Toray (2001b)</td>
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<td>Comp</td>
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<td>Gardner et al. (2000)</td>
<td>96 mo</td>
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<td>Keel et al. (1997)</td>
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<td>Adol</td>
<td>Yes</td>
<td>BUL</td>
<td>887</td>
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<td>BUL</td>
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<td>BED</td>
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<td>.178</td>
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<td>Stice &amp; Agras (1998)</td>
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<td>231</td>
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<tr>
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<td>.04*</td>
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<tr>
<td>Maintenance of eating pathology</td>
<td>60 mo</td>
<td>Adult</td>
<td>Yes</td>
<td>BUL</td>
<td>102</td>
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<td>.258</td>
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<td>Adol</td>
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<td>218</td>
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<td></td>
<td></td>
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<td></td>
<td>.02</td>
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</tbody>
</table>

Note. ED = eating disorder; mo = month; Adol = adolescent; BUL = bulimic pathology; Comp = symptom composite; BED = binge eating disorder.
Sex differences in the relationships among weight stigma, depression, and binge eating

Joseph D. Wellman, Ashley M. Araiza, Crystal Solano, Eric Berru
Dual pathway model

- Pressure to lose weight
- Weight-bias internalisation
- Body dissatisfaction
- Dieting
- Negative affect
- Eating disorder
<table>
<thead>
<tr>
<th>The evidence</th>
<th>Why not</th>
<th>Why</th>
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</thead>
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<tr>
<td>Obesity prevention</td>
<td>Why not</td>
<td>Why</td>
</tr>
<tr>
<td>Promote recognition of weight status</td>
<td>Increases:</td>
<td>Decreases:</td>
</tr>
<tr>
<td></td>
<td>• Body dissatisfaction (Project EAT)</td>
<td>• Body dissatisfaction (Halliwell 2013)</td>
</tr>
<tr>
<td></td>
<td>• Weight stigma (Sutin)</td>
<td>• Dieting (Andrew et al 2016a, 2016b)</td>
</tr>
<tr>
<td></td>
<td>• Disordered eating (Project EAT, Frank et al 2018, Fredrickson et al 2015)</td>
<td>• Weight gain (Project EAT)</td>
</tr>
<tr>
<td></td>
<td>• Low self-esteem (Perrin et al 2009)</td>
<td>• Unhealthy weight control behaviours (Project EAT)</td>
</tr>
<tr>
<td></td>
<td>• Psychological distress (Atlantis &amp; Ball 2008)</td>
<td>• Risk for ED</td>
</tr>
<tr>
<td>Eating disorder prevention</td>
<td>Why</td>
<td>Increases:</td>
</tr>
<tr>
<td>Promote body satisfaction through increasing appreciation and eradicating weight bias/stigma</td>
<td></td>
<td>• Physical activity (Becker et al 2017)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Intuitive eating (Andrew et al 2016a, 2016b)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Mental health outcomes (Becker et al 2017)</td>
</tr>
</tbody>
</table>
Epidemiology & Community Health Research

Project EAT

Dietary patterns developed during adolescence and young adulthood may contribute to obesity and eating disorders and may increase risk for several important chronic diseases later in life. Furthermore, the prevalence of overweight has increased significantly, in particular among minority populations and young people from low socio-economic backgrounds. In order to address these growing problems, it is essential to identify which groups of young people need to be targeted for intervention and to identify the factors that need to be addressed in interventions. Large gaps exist in our understanding of the factors associated with nutritional intake, physical activity, and weight status among young people.

More Project EAT

- Project EAT
- Project EAT II
- Project EAT III
- EAT IV
- EAT 2010
- F-EAT
- Project Results
- Presentations & Student Research
- Publications
- EAT Surveys

Check out what the popular press says about Project EAT

Research Areas

- Home
- Alcohol Epidemiology Research
- CVD Research
- Cancer Epidemiology
- Epidemiologic Methods
- Genetic Epidemiology
- Healthy Youth Sport Study
- HIV/STI Studies (HIPS)
- Maternal & Child Public Health
- Nutritional Epidemiology
- Obesity Research
- Project EAT
- Tobacco Control Research
- Type-2 Diabetes Research
- Women's Health Research
- Spring Student Presentation day
Does Body Satisfaction Matter? Five-year Longitudinal Associations between Body Satisfaction and Health Behaviors in Adolescent Females and Males

Dianne Neumark-Sztainer Ph.D. a, b, c, Susan J. Paxton Ph.D. b, Peter J. Hannan M.Stat., Jess Haines M.H.Sc., Mary Story Ph.D.

Purpose

This study addresses the question, “Does body satisfaction matter?” by examining longitudinal associations between body satisfaction and weight-related health-promoting and
Body Image

- Physical activity
- Mental health
- Weight stigma
- Eating patterns
- Eating attitudes
- Risky behaviors
- Body weight

Eating Disorders

Obesity
Dieting and unhealthy weight control behaviors
- Skipping meals
- Eating very little
- Using food substitutes
- Diet pills

WCB at both Time 1 and 2 (5 years), predicted greater BMI increases in Males and Females at Time 3 (10 years)
• Adolescents who misperceived themselves as overweight had greater odds of becoming obese than those who perceived their weight accurately.

• Accurate weight perception was not associated with healthy weight-related behaviours. Awareness of overweight and body dissatisfaction may be detrimental to the adoption of healthy weight-control behaviours.
Among overweight young people, perceiving weight as “about right” protective of further weight gain over time.
Perception of being overweight or underweight (whether accurate or not) significantly increases psychological distress.
Low self-esteem adolescents = higher odds of correct perception of overweight

Perception of being overweight when not = highest odds of low self-esteem
Focus on weight is bad for mental health

• Perception of overweight/obesity increases:
  • Body dissatisfaction and body shame
  • Weight stigma
  • Negative affect

• Weight focus moves people along the eating disorder pathway

• Focus on *health behaviours* is protective because:
  • It does not promote body dissatisfaction or weight stigma
  • Keeps people off the eating disorder pathway
  • Protects mental health
What about parents?

ARTICLE

Accurate Parental Classification of Overweight Adolescents’ Weight Status: Does It Matter?

Dianne Neumark-Sztainer, PhD, MPH, RD\textsuperscript{a}, Melanie Wall, PhD\textsuperscript{b}, Mary Story, PhD, RD\textsuperscript{a}, Patricia van den Berg, PhD\textsuperscript{a}

Divisions of \textsuperscript{a}Epidemiology and Community Health and \textsuperscript{b}Biostatistics, School of Public Health, University of Minnesota, Minneapolis, Minnesota

The authors have indicated they have no financial relationships relevant to this article to disclose.

What’s Known on This Subject

Research suggests that many parents do not recognize that their children are overweight. However, research has not adequately explored what parents do when they have more accurate perceptions of their child’s weight status.

What This Study Adds

This study shows that accurate parental perception of an overweight adolescent’s weight status is not associated with parental behaviors that are likely to help adolescents make healthy food choices, be more physically active, and have better long-term weight outcomes.

(Pediatrics, 2008)
Parent Conversations About Healthful Eating and Weight Associations With Adolescent Disordered Eating Behaviors

Jerica M. Berge, PhD, MPH, LMFT; Rich MacLehose, PhD; Katie A. Loth, MPH, RD; Marla Eisenberg, ScD, MPH; Michaela M. Bucchianeri, PhD; Dianne Neumark-Sztainer, PhD, RD, MPH

Journal of Behavioral Medicine
February 2015, Volume 38, Issue 1, pp 122–135 | Cite this

Parent-adolescent conversations about eating, physical activity and weight: prevalence across sociodemographic characteristics and associations with adolescent weight and weight-related behaviors

Authors

Jerica M. Berge, Richard F. MacLehose, Katie A. Loth, Marla E. Eisenberg, Jayne A. Fulkerson, Dianne Neumark-Sztainer
Summary

• Promoting weight recognition appears to increase risk of
  • unhealthy weight control behaviours
  • poor mental health outcomes
  • progress along the eating disorder pathway
  • continued weight gain
• Promoting the belief that weight is “about right” (body satisfaction) leads to:
  • less unhealthy behaviours
  • lower psychological distress
  • less weight gain
  • because individuals stay off the eating disorder pathway
18-month study
18-month study

- Doctoral student
  - Followed up parents with 18-month online questionnaire
  - Conducted 30-minute play based interview with their children
  - Assessed for significant group differences in the children at 18-months post-intervention
  - Parents in Groups C and D delayed their receipt of CBCC for a further 6-months, receiving after their 5th and final assessment
18-month follow-up

- No stat sig differences between 12m and 18m completers
- n = 92 children
  - $M_{\text{age}} = 5.71$ years
  - Range = 3.5-8 years
  - Girls = 61
  - Boys = 30

<table>
<thead>
<tr>
<th>Group</th>
<th>Parents</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>32</td>
<td>27</td>
</tr>
<tr>
<td>CBCC resource +</td>
<td></td>
<td></td>
</tr>
<tr>
<td>parent workshop</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group B</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td>CBCC resource only</td>
<td></td>
<td></td>
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<tr>
<td>Group C</td>
<td>11</td>
<td>19</td>
</tr>
<tr>
<td>Nutrition resource</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group D</td>
<td>22</td>
<td>19</td>
</tr>
<tr>
<td>Wait-list control</td>
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<tr>
<td>TOTAL</td>
<td>91</td>
<td>92</td>
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</table>

(40%) (40.5%)
Measures: Child Self-Report

- Weight bias
  - Negative weight bias
  - Attitudes to thin
  - Attitudes to overweight
- Body Image
  - Body Esteem Scale
  - Current-Ideal Discrepancy
- Self-esteem
  - Child Health Questionnaire
  - Global Self Worth

- Eating behaviour
  - External
  - Emotional
  - Restrained
- Child weight (researcher measured)
  - BMIz
  - BMI change
Body Esteem Scale

- Modified for early childhood
- 19 items

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<th>1</th>
<th>2</th>
<th>3</th>
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<td><strong>Do you feel proud of your body?</strong></td>
<td>No</td>
<td>Unsure</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Do you like how you look in pictures?</strong></td>
<td>No</td>
<td>Unsure</td>
<td>Yes</td>
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</table>

• Higher scores indicate better body satisfaction
Negative weight bias

- Not invite to birthday party
- No friends to play with
- Plays all by him/herself
- Gets teased by others
- Other children don’t like
<table>
<thead>
<tr>
<th>Measure</th>
<th>Contrasts</th>
<th>Diff (Est Hypoth)</th>
<th>SE</th>
<th>p</th>
<th>$\eta^2$</th>
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<td><strong>Negative weight bias</strong></td>
<td>D vs BCA</td>
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<td>1.33</td>
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<td>C vs AB</td>
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<td><strong>External Eating</strong></td>
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Negative Weight Bias

Group A
Group B
Group C
Group D
Eating disorder prevention model

• Because mental health is central, we want to
  • Reduce weight bias/stigma
    • Because this protects mental health in myriad ways and promotes self-esteem
    • Promote body satisfaction/appreciation
    • Because this predicts sustainable physical activity patterns and healthful eating practices
  • Encourage intuitive eating for health and enjoyment
    • Because restriction/deprivation increases over-eating through physiological and psychological pathways
  • Teach health behaviours for enjoyment, health, and goals/values
    • Because health behaviours for weight loss may not be successful/sustainable
An example

#Fitspo
https://www.youtube.com/watch?v=TOOC6qy3gYk

#ThisGirlCan
https://www.youtube.com/watch?v=toH4GcPQXpc
Thank you

• CBCC Research Team
  • Susan Paxton
  • Laura Hart
  • Stephanie Damiano
  • Agus Salim
  • Connie Li Wai Suen
  • Fiona Sutherland
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